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when I left them still forming a Canopy near the *Zenith*, as is above described.

The Air was very Calm and Serene, not a breath of Wind stirring; as I remember it was also *Nov. 10th.*

The Moon was now a Day or two older than it was on *Nov. 10th.* and a good deal further to the W. than when I saw the Coruscations that Night being then near full South. She had now round her what is commonly called a Burr larger than ordinary, and several very lucid Clouds at a little distance.

# VIII. *Nuperae Observationes Astronomicae cum Regia Societate communicatae.*

CUM in Num. harum *Transactionum* 357<sup>mo</sup>. Observationes nonnullas Planetarum ac Lunæ conservari dignissimas in unum congeessimus, ac probante Societate nostra edidimus; liceat paucula folia hujusmodi collectionibus in sequentibus quotannis consignari. Nuperae autem quas habemus Observationes hæc sunt.

1718. *October* 10°. mane, applicabatur *Jupiter* ad Fixas Telescopicas, quarum loca, occasione primæ apparitionis Cometæ anni 1680, (de quâ vide *Phil. Transf.* N°. 342) sedulo inquisivit Rev. D. *Pound*, ac nuper verificata nobiscum communicavit, una cum accuratâ observatione transitûs Jovis juxta eas hac vice, ac deinde alterâ *Febr.* 11°. statim ab oppositione Solis & Jovis. Incunte autem *Januario* 1719. loca stellarum sic se habuere.

	Long.	Lat. Bor.	Long.	Lat. Bor.
<i>d</i> $\delta$	29°. 59'. 43"	1. 7. 50	<i>a</i> $\eta$ 0°. 25'. 41"	1°. 28'. 54"
<i>e</i> $\eta$	0. 6. 13	1. 10. 18	<i>x</i> $\eta$ 0. 5. 43	0. 51. 56
<i>c</i> $\eta$	0. 3. 13	0. 32. 50		
		10 H 2		Ubi

Ubi notandum stellas *d* & *e* eandem præcisè hoc seculo fortiri declinationem, *x* vero exiguam esse stellulam in priore descriptione ob parvitatem omisſam.

Jam *Octob.* 9°. 17<sup>h</sup>. 50' T. æq. Jovis limbus orientalis attingit lineam stellas *e* & *c* jungentem, ſimul centrum ejus diſtabat ab *e* 21'. 20" & à *c* 16'. 25". ſtatimque aberat à *d* 19'. 35". Parvula *x* Jovi proxima latuit, luce ejus obumbrata.

*Decemb.* 11°. 18<sup>h</sup>. 30. T. æq. Saturni centrum diſtabat à  $\mu$  *Librae Bayero*, 28'. 32", & Fixâ Borealius erat 4'. 31". Hinc conſulit D. Pound Obſervator Saturni locum  $\eta$  10°. 41'. 10", cum Lat. Boreal. 2°. 16'. 43".

1719 *Feb.* 11°. 6<sup>h</sup>. 56<sup>1</sup>/<sub>2</sub> T. æq. Jovis retrogradi centrum diſtabat à ſtella *d* ſuperius deſcriptâ — 10'. 42"  
 6. 58<sup>1</sup>/<sub>4</sub> Idem centrum diſtabat ab *e* — 6. 7  
 9. 37<sup>1</sup>/<sub>3</sub> Iterum diſtancia capta à *d* — 10. 9  
 9. 43<sup>1</sup>/<sub>2</sub> Iterum ab *e* — 6. 11  
 9. 49<sup>1</sup>/<sub>2</sub> Jovis centrum diſtabat ab *a* — 25. 21  
 9. 58<sup>1</sup>/<sub>2</sub> Idem centrum à parvula *x* — 24. 38

Circa Horam ſeptimam Jovis limbus orientalis attingit lineam per *x* & *e* productam; Jupiter itaque tunc habuit  $\eta$  0°. 6' cum Latitudine Boreal. 1°. 16'. 30". Deinde,

*Feb.* 13°. 8<sup>h</sup>. 0'. T. æq. Declinatio centri Jovis, Micrometro meſurata, Borealius erat cā ſtellæ utruſque *d* & *e* 11'. 37", & 8<sup>h</sup>. 20' eadem differentia inventa eſt 11'. 36". Horâ vero 8<sup>h</sup>. 48' centrum Jovis diſtabat ab *e* 17'. 40".

*Apr.* 22°. 10<sup>h</sup>. 45'. T. æq. Saturni centrum ſequebatur  $\mu$  *Librae* 4<sup>1</sup>/<sub>2</sub> Temp. ſive 1'. 8" Aſc. Rectæ. Micrometro autem Borealius inventus eſt Fixâ 35'. 25". Stella autem in *Catalogo Britannico* tunc habuit,  $\eta$  10°. 16'. 8". Lat. Bør. 2°. 3'. 54".

*Maii* 16°. 8<sup>h</sup>. 00' T. æq. x sequebatur *Cor Leonis* 1°. 34<sup>1</sup>/<sub>2</sub>' Ascensionis rectæ; Borealiior autem erat stellâ illâ 0'. 41<sup>1</sup>/<sub>2</sub>'. Temporis, hoc est, 10'. 7" Arcus cœlestis.

Eâdem nocte, 15<sup>h</sup>. 18' T. app. Observavit D. *Stephanus Grey Martem*, ratione Ascensionis rectæ, sequi stellam in *Cauda Capricorni* orientalem 16'. 15"; simul non nisi 0'. 11". australior erat quam Fixa.

*Junii* 7°. 10<sup>h</sup>. 15'. T. app. *Jupiter* directus iterum reversus est ad stellas Telescopicas prædictas, & tum sequebatur stellam d. 0'. 35" Ascensionis rectæ, & 10<sup>h</sup>. 30' distabat fixa à limbo *Jovis* proximo 4'. 18".

Postridie *Junii* 8°. 10<sup>h</sup>. 20', *Jupiter* sequebatur stellam alteram e 1'. 30" Ascensionis rectæ, ac statim distantia limbi *Jovis* proximi à stella capta est Micrometro 7'. 30".

*Julii* 5. 8<sup>h</sup>. 26'. T. app. Conjungebantur arcuè *Jupiter* & *Venus*, quæ tum Borealiior præcedebat *Jovem* secundum Ascensionem rectam 1'. 20": Centrorum autem distantia ex decies repetitis media, capta est 13'. 36". Hæc tria *Londini* observata communicavit harum Scientiarum eximius Cultor D. *Martinus Folkes*, R. S. Soc.

*Aug.* 3. 12<sup>h</sup>. 20' T. æq. *Mars* pene Acronychus sequebatur stellam  $\pi$  *Aquarii Bayero* 10'. 58" Temporis, sive 2°. 44'. 57" Ascensionis Rectæ. Erat autem fixâ *Mars* Borealiior 0'. 36" tantum; unde concessio loco stellæ *Britannico* fit locus *Martis* observatus x 7°. 10'. 10" cum latitudine Australi 6°. 38'. 10".

*Aug.* 10°. 11<sup>h</sup>. 50' T. æq. *Mars* sequebatur fixam minorem quæ præcedit  $\pi$  *Aquarii* 1°. 39'. 30" ratione Ascensionis rectæ; Australior vero quam fixa 10'. 42".

*Aug.* 16°. 7<sup>h</sup>. 18'. T. æq. *Spica Virginis* præcedebat *Veneris* centrum 5<sup>1</sup>/<sub>4</sub>" secundis temporis, sive 1'. 20" Ascensionis rectæ, australior Planetâ 18<sup>1</sup>/<sub>2</sub>" temp. sive 4'. 35'.

*Aug.* 17°. *Mars* pridie Acronychus ac Terris proximus observatus est ad duas stellulas contiguas, Parallaxis ejus.

ejus investigandi gratiâ, juxta methodum à D. *Cassino*, in libro de Cometa anni 1680, exhibitam, Unde *Martis* Parallaxin eruere in *Transact.* proximâ conabimur. Harum vero stellarum borea tum temporis locum habuit  $\times 3^{\circ}. 5'. 50''$  cum Latitudine australi  $6^{\circ}. 6'\frac{1}{4}$ : altera vero Australior habuit  $\times 3^{\circ}. 5'. 30''$ , cum Lat. Aust.  $6^{\circ}. 10'\frac{1}{4}$  proximè. Horâ vero  $10^h. 40'$ . T. æq. Australem sequebatur *Mars*  $41'$  min.  $40''$  Ascensionis rectæ, eâque adhuc Australior erat  $7'. 50''$ .

*Sept.* 18.  $9^h. 20'$ . T. æq. *Mars* visus est præcedere stellam in *Catalogo Britannico* Aquarii  $53^{ia}$   $3'. 45''$  Temporis, sive  $56'. 24''$ . Ascen. Rectæ; simulque Stella Borealis erat limbo Martis boreo, non nisi unâ Planetæ diametro. Locus stellæ  $\approx 29'. 57'\frac{1}{2}$  Lat. Aust.  $4^{\circ}. 48'\frac{1}{2}$ .

*Octob.* 30. Vesperis  $5^h. 45'$ . T. app. *Mars* proximus stellis duabus contiguus ad *b*  $\approx$  Bayero, quæ sunt  $\approx 73^{ia}$  &  $74^{ia}$  *Catal. Brit.* Præterierat rectam per easdem duas, eratque angulus ad Martis centrum ad sensum rectus: Borea vero stellarum eandem habuit declinationem cum limbo Planetæ austrino.  $5^h. 53'$  distantia stellæ à centro Martis  $2'. 30''$ .  $5^h. 56'$  centrum Martis distabat à tertiâ & Australiore ad *b*, sive  $75^{ia}$  Aquarii,  $17'. 04''$ .  $6^h. 18'$  distantia centri à Boreâ sive  $73^{ia}$  erat  $3'. 5''$ . Hinc concludere licet Martem, horâ  $3^h. 30'$  proximè, stellæ Boreæ conjunctum fuisse, eamque uno tantum minuto ad Boream reliquisse. Fixæ autem locus è *Catalogo Britannico* tunc erat  $\times 10^{\circ}. 29'. 00''$  cum Lat. Aust.  $1^{\circ}. 40'\frac{1}{4}$ .  $74^{ia}$  vero habuit  $\times 10^{\circ}. 29'. 50''$  cum Lat. Aust.  $1^{\circ}. 44'\frac{1}{4}$ .

*Novemb.* 16.  $19^h. 18'$ . T. æq. *Venus* præcedebat *Lancem Libræ* Austrinam  $3'. 13''$  Temp. sive  $48'. 23''$  Ascen. Rect. simulque fixâ borealius erat centrum Veneris  $7'. 45''$ . *Venus* quasi Stationaria apud Nodum ejus Ascendentem.

*Decemb.*

*Decemb.* 3°. 19<sup>h</sup>. T. æq. *Saturnus* præcedebat tertiam ad  $\zeta$  *Libræ*, five *Libræ* 29<sup>am</sup>. *Cat. Brit.* 0'. 46" Temp. five 11'. 32" Asc. Rect. Erat autem fixâ Australior 15'. 29". differentiâ per Micrometrum captâ. Unde Saturni locus in 20. 25 $\frac{1}{4}$  cum Lat. Bor. 2°. 5' $\frac{1}{4}$ .

### *Observationes Lunæ & Eclipsium.*

In dicta *Transact.* N°. 357. pag. 852. Observationem dedimus Eclipsios Lunaribus anno 1717 *Martii* 15° P. M. St. vet. apud *Cambridg Nov-Anglorum* habitam; apud nos vero ob Nubes inconspicuam. Desiit autem Eclipsis ibidem 11<sup>h</sup>. 42' $\frac{1}{2}$ , neque alia ejus tum temporis superpetebat observatio. Postea vero arte Nauticâ & industriâ inter primos insignis Dom. *Candler* Navarcha Regius, ex *America* attulit & nobiscum communicavit ejusdem Eclipsios phases *Lime Peruviae* à Dom. *Petro Peralta*, Mathematico Regio multis titulis claro, observatas, Typisque ibidem impressas. Initium autem Eclipsios ponit *Lima* 8<sup>h</sup>. 41'. 8". Finem vero 11<sup>h</sup>. 19'. 55". Simul laudatus D. *Candler* propriam observationem, ad Insulam quam *Virgine Gorda* vocant captam, concessit, Ibi desiit Eclipsis 12<sup>h</sup>. 13'. P. M. Fine per cælum sudum distinctè viso. Postremo inter Acta Regiæ Scientiarum Academiæ *Parisiensis* istius anni, comperimus duas & quidem satis conformes hujus Eclipsios observationes, alteram à D. *Cassino*, alteram à D. *de la Hire* in Observatorio Regio captas: Hic Initium æstimavit 13<sup>h</sup>. 54'. Finem vero certius 16<sup>h</sup>. 38'. 10". At Ille Initium 13<sup>h</sup>. 55' & Finem 16<sup>h</sup>. 38'. 25". Maxima obscuratio huic 7 $\frac{1}{3}$  Dig. illi 7 $\frac{1}{2}$  Dig.

Hinc ex Fine, in singulis locis ut videtur accuratius sumpto, proveniunt Longitudinum differentiæ inter *Parisiæ & Limæ* 5<sup>h</sup>. 18'. 20", Inter *Parisiæ & Cambridg* 4<sup>h</sup>. 55".

4<sup>h</sup>. 55'. 50". Inter *Parifios* & Infulam *Virgine Gorda* 4<sup>h</sup>. 25'. 20". E quibus fi 9'. 40" subduxeris, provenient Longitudines ad occafum *Londini*, nempe *Lima* 77°. 10'. *Cambridg* *Nov Anglorum* 71<sup>o</sup>½, ac denique Infulæ *Virgine Gorda* 63°. 55'; unde Infularum adjacentium fitus Geographici certo corrigi poterint.

Altera Lunæ Eclipsis ejufdem anni *Septembris* nono Vefperi, ab iifdem obfervatoribus & D. *Maraldo Parifiis* confpecta eft. Finem *Londini* obfervavimus in ædibus Societatis Regiæ 7<sup>h</sup>. 26'. *Parifiis* vero D. *Caffino* Finis 7<sup>h</sup>. 34'. 50", D. *Maraldo* 7<sup>h</sup>. 35'. 30", & D<sup>no</sup> *De la Hire* 7<sup>h</sup>. 34'. 15". Simul D. *Wurtzelbaur Noribergæ* eundem Finem vidit 8<sup>h</sup>. 10'. 45" Hinc confirmanatur Meridianorum differentix *Londinum* inter & *Parifios*, præfertim ex obfervatione D. *Maraldi*, nempe 9'. 30"; uti & inter *Londinum* & *Noribergam* 44'. 45", quantam sæpius olim experti fumus. Porro quinto die poft Eclipsin, *Septembris* 14<sup>to</sup> vefperi, Luna occultavit Palilicium *Parifiis*, obfervantibus figillatim DD. *Maraldo* & *Delisle* Juniore. Evanuit autem ftella è regione Maculæ *Grimaldi* five *Paludis Marcotidis*, Hora 9<sup>h</sup>. 11'. 35". Emerfit autem è limbo Lunæ obfcuro 10<sup>h</sup>. 3'. 55". Hujus Occultationis obfervatio *Londini* habetur pag. 853. *Phil. Tranfa&*.

Obfervationes illas, in quibus Temp. æq. adhibetur, Rev. D<sup>o</sup> *Pound* acceptas debemus. Tubo autem quindecim-pedali capta pro certiffimis habenda funt.